

ABSTRACT

A method and apparatus for the using optical waveguides to detect chafing of electrical cables is disclosed. Chafing damage is preferably detected by disposing several optical 5 waveguides about the periphery of an electrical cable such that any chafing that causes damage to the electrical cable will likely also cause damage to at least one of the optical waveguides. The disclosed apparatus and method allows multiple optical waveguides of one cable segment to be connected to 10 multiple optical waveguides of an adjacent cable segment using only a single optical waveguide connection, while still allowing each of the optical waveguides of either cable segment to be monitored independently of each other.